

Abstract of the Disclosure

At V-shaped grooves 112a and 112b on a substrate 110, an optical fiber 150 and lens elements 130a and 130b each having a fitting portion with an external diameter substantially equal to the external diameter of the optical fiber 150 are positioned and mounted. A wavelength branching filter 140 is disposed in a concave groove 114 formed on the substrate 110, and a PD 160 is set at the upper surface of the wavelength branching filter 140. An LD 120 and the optical fiber 150 are optically coupled via the lens elements 130a and 130b. Light with wavelength λ_1 emitted from the LD 120 is transmitted through the wavelength branching filter 140 and enters the optical fiber 150. Light with wavelength λ_2 emitted from the optical fiber 150 is deflected at the wavelength branching filter 140 and enters the PD 160.